McBee

Sundell, R. A.
1963

September 23 - Flew by jet from Washington to Honolulu leaving at 9:45 a.m. and arriving at 5:50 p.m. Bob Fleet and Roger Clapp were waiting at the airport and we drove to the Waikiki International.

September 24 - Went to Hickam A.F.B. to arrange for flight to Johnston. Was told that I would be put on the 9 a.m. flight September 25. Spent several hours birding in the West Lock area: Black-necked Stilt 250 +, Black-crowned Night Heron 10, Cattle Egret 12, Spotted Dove 20, Barred Dove 40, Strawberry Finch 8, Rice bird 30, Japanese White-eye 5, Mynah 40, Coot 60.

September 25 - Arrived at 7:30 a.m. at Hickam and was told that the plane had left at 7. Arranged for reservation to Johnston on 9 a.m. flight on September 27. Checked equipment at Hickam and returned to hotel.

September 26 - Went with Roger Clapp to Pali lookout. Spent some time taking pictures and then birded in the vicinity: Red-billed Leothrix 8.

September 27 - Left Waikiki International at 5:00 a.m. Roger Clapp drove me out to Hickam A.F.B. where I was informed that I had a confirmed place on the 9:00 a.m. flight to Johnston Island (arrived Hickam 5:30 a.m.) Phone call from Capt. Sudduth at 8:30 just prior to boarding regarding shearwater shipment and problems having them flown out of Johnston. Plane (C-118 departed Hickam 9:05 a.m.; arrived Johnston Island 12:20 p.m. After security briefing called Ken Amerman and talked with Capt. Thompson and Sgt. Howard (Air Force flight schedule office) regarding bird shipment. Shearwaters still on Sand Island so could not accept offer of Lt. Col. in charge of C-118 to transport birds in spite of smell. Talked with Capt. Sudduth who advised releasing birds. Ken and two Coast Guard men arrived. Observed 2 Fairy Terns on way to pier. Arrived Sand Island about 3 p.m. Spent rest of day checking in and getting set up. Great Frigatebirds (25 /), Brown Booby (4) and Common Noddy (10) seen from island near barracks; also Golden Plover (4) and Ruddy Turnstone (8). Released shearwaters at about 4:30 p.m.; 147 alive, 3 dead.

September 28 - Ken and I took tour of the island during mid-morning. Two adult Red-tailed Tropicbirds put on excellent display circling low over the island and nearly landed on the high crown in back of the transmitter building. They hovered just above the ground several times and one bird gave the tail lowering display flying just above the other bird. Both birds possessed fine long central rectrices.

A dead Bristle-thighed Curlew was found near the trash burning area (the old dump). It was in poor condition and could not be salvaged for a skin so we decided to save it for a skeleton. We will pick it up after the ants, cockroaches and dermestids have completed their work. A member of the Coast Guard crew, Fryall, reported the bird to us after recognizing that it was something out of ordinary. The crew members are surprisingly observant and know all of the common species of birds, most of them by appropriate nicknames that they have coined.

A Noddy egg close to the 4 foot pipe.

Five adult Wedge-tailed Shearwaters and several chicks have been found dead. The adults may be birds that were weakened by their 18 hour confinement for the aborted bird shipment. The chicks may be due to the cats or dogs. An explanation is still needed for the former dead adults occasionally found. Several of the crew members report that the dogs and cats destroy birds.

October 1 - Sixth Progress Report submitted.

October 3 - Fourteen frigatebird chicks color tagged.

A new species of shorebird for the island, a Pectoral Sandpiper was identified and collected close to the peninsula on the NE corner of the island. Don Biesen collected it for us. It has been stored in the freezer in the chief's quarters with a Golden Plover found dead yesterday.

Shorebird count at 2 p.m.: Golden Plover 16, Ruddy Turnstone 14, Wandering Tattler 3.

Two immature Sooty Terns with badly broken wings were killed and given to Mr. Chaigan of the A. E. C. on Johnston Island for a radioactivity content analysis.

October 4 - Bristle-thighed Curlew reported to us by Winchell.

October 5 - Curlew reported by Dougherty.

October 7 - We began banding Shearwaters again with newly arrived bands. We did 100 nestlings, a very laborious, time-consuming job.

October 8 - Banded 100 adult shearwaters in 1963 area between road and the dump to both shores.

October 9 - 200 adult shearwaters banded. Many more found in area covered last night. Second hundred done in area between road to dump and transmitter building. Several more with orange tags and no bands found and rebanded. Leg sizes vary a good deal; some of the bands newly put on seem as if they could slip over the foot. Total of 500 adults banded in area of heaviest previous banding suggesting a substantial nonbreeding population and/or birds feeding at sea. It also might mean that there are over-lapping populations using the island or that a large number of birds have slipped their bands. The total population in this area cannot be more than 700-800.

The population seems to fluctuate with the lunar cycle. Shearwaters are lowest in numbers at the time of the full moon, then increase after this. It may merely reflect a different time of returning at night (many may come in later at night as the moon gets higher). I think that it may reflect behavioral differences in squid (layers rise to surface immediately when moonlight is not present). This would suggest a much longer feeding period for the shearwaters when there is a higher, more full and brighter moon.

Sooty Terns are very scarce now with 10-25 during the day, 25-50 at night. At the time of the full moon or just afterwards, the number suddenly increased to about 100 or more at night.

October 13 - 200 adult shearwaters banded along N (left) side of road and transmitter building. We find an average of 5-6 per night (per 200) with tags but no bands suggesting considerable band loss due to slipping. 6 frigatebirds banded.

October 14--Last 200 adult shearwater bands used on north side of transmitter building and in back of it. We estimate that there are five hundred to six hundred unbanded adults (possibly even more)., and one hundred to two hundred unbanded chicks. Therefore 1900 banded plus six hundred to eight hundred unbanded and 450 collected gives a total population of 3000± (including chicks).

October 15--I found a Semipalmated Plover on the rocks behind the laundry room of the barracks about 9 a.m. Holmes shot it and we prepared the skin immediately. Specimen badly shot up and immature. Skin very poor. This species was previously observed by Ken on October 5 and August 30 to September 1.

About twenty Fairy Terns were observed about 1:30 p.m. on Johnston Island. A count of sixteen was made in the trees beyond the PX and there were at least four more birds (probably closer to eight or nine additional birds flying around). Ken says that this is the largest number reported since Binion made his original estimate of 50+ for the Johnston Island population.

October 16--Ken and I took mid-morning survey around island: Five Hawaiian (White-capped) Noddies observed roosting on guy wires close to concrete block on west side of peninsula at northwest corner of island, distinctive call noted; Golden Plover 20+ counted (total island population estimated to be thirty to thirty-five); Wandering Tattler two; Fairy Tern three; Red-footed Booby 150 est.; Brown Booby 12; Great Frigatebird 175+; Wedge-tailed Shearwater two. Most of the day was spent compiling the Seventh Progress Report.

October 17--Ken and I took a mid-morning survey around the island (9 a.m., as opposed to 10 a.m. yesterday): Wedge-tailed Shearwater eight; Red-tailed Tropicbird 1 adult (disappeared headed south out to sea); White-capped Noddy three (one immature calling continuously and exhibiting begging behavior toward all nearby birds, even Common Noddies); Golden Plover 20+; Great Frigatebird 150+ (two ♂♂ with inflated throat puches noted, one on small island, one on top of main island); Sooty Tern twelve.

We banded ten ♂ and two ♀ frigatebirds, our highest total for some time, in addition to about 35 Common Noddies.

October 18--In the early afternoon several members of the crew reported seeing a duck on the water near the boat dock. Ken and I invstigated and found an eclipse plumage ♂ or ♀ Pintail. It seemed to be in good shape although we were able to approach to within 25 to 30 feet of the bird as it swam close to the shore between the dock and the seaplane ramp. The slim build but large body, slender neck and the speculum (green with rust orange on the leading margin and a white stripe along the trailing margin) were all closely observed through the binoculars at close range in perfect light conditions. The bird was last seen by Winchell who reported it swimming east about half way along the causeway sometime after 2 p.m. The bird could not be collected because all the crew members were busy preparing for the late afternoon visit of Rear Admiral Knapp, Commandant, 14th Coast Guard District, and about a dozen civilians from Honolulu.

As Ken and I were working in the pump house about 3 p.m. a Wandering Tattler came walking in. Ken scared it out but it went only a very short distance and soon came in again. It was easily caught and we took it to the other end of the island to be released. The bird was in very poor shape so we gave it some water but it died while I was holding it. A skin will be prepared from the specimen which is in excellent shape. Ectoparasites from the breast feathers were collected and preserved.

October 19--Tidal wave for second Saturday night in succession; this time we were on the roof of the generator building from 9 to 11:15 p.m. (vs. 12:45 to 4 a.m. last week).

We went out banding after the alert was called off: Ruddy Turnstone one (two banded October 14 not recorded in notes), there are between fifty and eighty that roost on the small offshore island each night on the rocky flat along the south shore but fly up and do not return as soon as any light is flashed in their direction; frigatebird three ♀♀, 1 ♂; Common Noddy about twenty-five (mostly along east slope of island; many of them throw up squid and occasionally small fish). A sick Golden Plover was found on the offshore island and released close to the old dock on the main island. Its legs appear to be very weak or partially paralyzed.

October 20--We banded three ♂♂ and one ♀ frigatebirds, about ten Common Noddies and one adult Red-footed Booby (caught on the top of the cement fortification on small offshore island, in excellent adult plumage). The sick Golden Plover was recovered close to the area where it was released. Many ants were attacking the joints of the legs which bleeding slightly. The bird was cleaned up and given some water and then put in a small box in the pump house.

October 21--Ken and I banded three ♂♂ and two ♀♀ frigatebirds, one immature (or dark phase ?) Red-footed Booby and about twelve Common Noddies (one of these had a band that we removed from it 723-44022; one of Ashmole's; we rebanded it; the leg was bleeding slightly under the old band).

October 22--Most of the day was spent working over banding reports and catching up on long-overdue field notes. Late in the afternoon Ken received word that his flight to Honolulu originally scheduled for a.m. 23rd had been moved up to this evening. I went to the MATS terminal with Ken, Duncan and Hinton who were also going back on the same plane. We came back before the plane took off (11:30 p.m.).

October 23--After squaring away Ken's things that he left I looked through banding records and then finished the field notes.

In the middle of the afternoon I released the Golden Plover which can move about actively but cannot stay on its feet for very long. It was attacked by two Ruddy Turnstones and driven under a rock. The bird was recaptured and returned to the pump house.

October 24--A morning (9 to 11 a.m.) survey of the bird colony was made. A total of eight White-capped Noddies was counted, mostly on or around the guy wires and concrete abutment on the peninsula at the northeast corner. Also 450+ Common Noddies were observed, as well as five Brown Boobies 150+ frigatebirds, 125 Red-footed Boobies, twelve Golden Plover and ten Ruddy Turnstones. Three Fairy Terns flew over for about ten minutes. One ♂ frigatebird with its red gular sac expanded was noted.

Six Sooty Tern adults and four immatures were present. Two birds flew over the peninsula and headed north disappearing out to sea which might have been Brown-winged Terns--backs lighter shade of color than normal adult Sooty, calls higher pitched and quite unlike Sooty Tern. Two Wandering Tattlers were seen.

The captive Golden Plover seems to be making good progress. I found it standing up in the box in the pump house for the first time today. It is being given fresh water and raw meat. The symptoms remind me of those observed in birds that had botulism that I observed along Great Salt Lake in Utah (severe diarrhea, loss of strength, and muscular coordination, and impaired equilibrium.).

Two messages from Deseret Test Center (DTC) arrived concerning a documentary film of our work to be made during November.

October 25--The Golden Plover was gone from the bos in the pump house this morning. Apparently it recovered enough to leave under its own power.

A message from DTC requesting information concerning our supply needs for a bird shipment in early November arrived. I took an inventory and replied by message. Ninety frigatebirds were counted on the offshore reefs and markers north of the causeway and signal building.

When going banding early in the evening I discovered that entrances to all but one of the shearwater burrows under the sidewalk on the north side of the transmitter building had been covered over and filled in. Since all of the adult and young birds using these burrows had been banded. I spent several hous r in digging out the openings. There were sic active nests, two of which contained the remains of chicks that had been dead for quite some time (several weeks). The other four chicks were in very good shape. The adults coming in to feed the chicks seemed thoroughly disoriented and confused (anthropomorphic, but best possible expression of the situation) by the disappearance of the burrow entrances the adults readily utilized them. No banding was attempted after completion of the excavations.

October 26--A full moon from dusk until 4 a.m. (October 27) restricted banding operations.

From 4 to 6:30 a.m. (dawn) I was able to band fifteen Common Noddies. From 6:30 until 8:30 I made observations on the entire colony. The shearwaters started leaving about 6 (very faint streaks of light in the east) and continued until the sun was completely up with most of them observed heading out to sea after circling over the island a few times before it was completely light. The Common Noddies all take flight and circle and swoop around (mostly over the water, occasionally over the island) for about 20 minutes (ten before sunrise, ten afterwards). The noddies from the large roosting concentrations then either return to the roosting sites or disappear out to sea. Several birds were observed circling around close to the east end of the island gaining altitude with each spiral. These finally flew off in a southeasterly direction. The frigatebirds from the colony on the top of the island were the first to leave when it became completely light. They circled some but mainly seemed to hover motionless (supported by the wind) over the high part of island (east of the LORAN antenna) where the southern most group of frigatebird nests is at the present time. The display of the ♂ frigatebirds was seen and heard. The brilliant red gular puch is fully expanded, the bill is pointed upward at a 50° to 80° angle from a horizontal plane, the wings are held wide open (fully extended and expanded) and shaken or fluttered during vocalizations which consist of a soft whinnying call given during the full display (closely resembling the call of the eastern Scrrech Owl, at a distance). The display was given by several ♂ frigatebirds in separate groups. Sitting on the guy wires or on the small island offshore. The calls were heard at dawn or shortly therafter.

In the earlier reference to the noddies banded it should have been noted that three bands were lost (probably while diggin out the shearwater burrow entrances): 753-301-32, 83 and 86. An intensive search for these bands was unsuccessful.

October 27--Banding was undertaken during the restricted (by the moon) dark period: 4:30 to 7 a.m. twenty-six Common Noddies were banded: 753-302 - 01 to -26. Observations were made prior to, at and after dawn of the common species. The dawn flight of the Common Noddies, the departure of the shearwaters and the courtship behavior of the ♂ frigatebirds was noted.

October 28--The first heavy showers in several months curtailed banding activities during the evening hours. The full moon is now in view from dusk to dawn so it is most unrewarding to try to band.

October 29--Banding was attempted again with fair success. The time span was 4:30 to 7 a.m. Twenty-one Common Noddies were banded. A heavy wind helped in making the birds less aware of my approach. A large Japanese fish ball was found on the epninsula at the northeast corner of the island. A Golden Plover was banded.

October 30--Light showers early in the evening discouraged any idea of banding. A trip around the island revealed the usual species and numbers of individuals present (see Summary Sheet - October 27; present trip 8 to 10 a.m.). An actual count of frigatebirds was made (290± 10). A count of Red-footed Boobies was only 100± 20 but many of these birds had already left the roosting sites (guy wires and cement blocks). Golden Plover are estimated to number 35+.

October 31--The day was spent preparing the equipment for the bird shipment. Everything is set except the boxes for the frigatebirds.

I decided to make one final attempt at banding (the full moon is up from dawn to dusk now).

The results were an all time low for banding: Four Common Noddies caught, three banded (one already banded), four tagged. The period of work was 6 to 6:45 a.m. (first light of dawn at about 6:15).

November 1--I worked on correspondence all day with the idea of having it out of the way during the period of John Bushman's visit and the bird shipment.

November 2--John Bushman (scheduled to be here November 3 - 5) called about 8:30 a.m. He had decided to move the schedule up and try to get the birds out on November 3. I spent the morning making up ten boxes (without partitions) for the frigatebirds. Bushman arrived on Sand Island on an M boat at 1:35 p.m. After he checked in we put together three more boxes for shearwaters bringing the total to twenty-two (he decided on 175 shearwaters instead of 150) and twelve boxes for sixteen Common Noddies. After supper we walked around the island and John took a number of pictures of the island and the birds. We started catching and crating birds at about 8 p.m. Mac McConnauhey assisted until about 9:30 p.m. We finished the last crates at 12:30 a.m. and decided to try for frigatebirds and noddies. The full moon had been up sisnce 10 p.m. and the best we could do was to catch two immature Common Noddies which were later released. It was decided to secure the frigatebirds and noddies during the Bushman's next visit (November 20). We waded out to the small offshore island but because of the bright moonlight the birds could not be approached. We turned in about 3 a.m.

November 3--The C-124 due in at 10 a.m. that the birds were to be shipped on had mechinical difficulties and did not arrive until 2:45 p.m. The birds were in the H. and N. warehouse on Johnston Island by 2:15. The C-124 with Bushman accompnaying the birds left at 6 p.m.

November 4--The day was spent squaring things away after the bird shipment. The pump house was cleaned up and all equipment was put away. The situation is back to normal.

November 5--The weather appears to be changing somewhat. Light to moderate showers of short duration are occurring most evenings and the winds (from the east or southeast) are noticeable stronger at night. Most of the vegetation is noticeably greener and quite a few shearwater burrows have collapsed as the surface of the ground softens due to absorbed moisture. This is especially true in the sandier areas of the island. Occasionally a few Sooty Terns are heard calling during the rain showers after dark.

November 6--Today was spent catching up on field notes and correspondence. When this is done last progress report will be written.

Very strong winds and several short but intense showers occurred during the evening. It became noticeably cooler after the first several showers had passed, as if a cold front had moved into the area.

November 7--The bird colony was surveyed between 8:30 and 10 a.m. with the following results: Wedge-tailed Shearwater one (tagged bird flying at east end of island), Red-tailed Tropicbird one (adult circled around bird colony about six times between 9 and 9:15 a.m.; bird called once), Brown Booby three (one over east end of island circling with frigatebirds), Red-footed Booby 35± 10 (maximum of twelve circling with frigatebirds), Great Frigatebird 200 to 250 (mostly circling over the east end of the island; one ♂ carrying a logn strand of vegetation returned repeatedly to the same location near the five immature frigatebirds toward the south end of the high part of the island; six of the fourteen immature frigatebirds are now flying), Golden Plover 25± 5, Ruddy Turnstone 15± 5, Wandering Tattler one, Sooty Tern two (immatures flying), Common Noddy 800± 50, White-capped Noddy four.

Banded from 10:30 p.m. to 2:15 a.m.: Shearwater one (615-01001), Noddy 25 (753-302-44, 48, 54-77). A large number of dead chicks was noted along the southeast margin of the bird colony in the area where Bushman caught birds for the shipment. An actual count will be taken during the day. Only five adult frigatebirds were flushed from the bird colony (smallest number yet) but many were recorded on the guy wires. It is very difficult to measure the effect of the disturbance to the bird colony due to the collecting activites for the live bird shipment but it is obvious that it had an effect. An interesting behavioral trait was noted in four Common Noddies that were caught and banded. A bird that was blinded by the beam from the headlamp but was obviously wide awake would stretch its neck and open its bill and extend its tongue. This whole procedure is repeated several times as the bird cranes its head and neck and then flies. No sound from the bird is audible.

November 8 --Word was passed to me by one of the members of the crew that Jeff (the older of the two dogs belonging to the station had killed eighteen shearwater chicks along the southeast edge of the bird colony. This was the area where Bushman collected very heavily and it seems likely that these were chicks that had recently lost their parents and were therefore starving to death.

About 6:15 p.m. I discovered Jeff killing one of the immature frigatebirds east of the transmitter building. I kicked him so hard that it knocked both of us down. According to several members of the crew he has been killing birds for many years and is not likely to stop. I enlisted the support to two crew members who frequently take the dogs with them on trips around the island in discouraging bird killing by the dogs.

November 9--The entire island was surveyed between 8 and 11:15 a.m. with the following results: Shearwater two (1 chick almost completely feathered out with natal down only around the head and neck was observed out of its burrow flapping its wings in bright sunlight;

I took two pictures of it and it returned to its burrow; one adult was observed in another burrow), Red-tailed Tropicbird two (9:30 to 10:15 a.m., adults circling over bird colony, both landed once and were closely observed; the spot where they were found was marked and will be checked for signs of nesting), Brown Booby three, Red-footed Booby 40± 10, frigatebird 150± 25, Golden Plover 30± 10, Ruddy Turnstone 25± 10, Wandering Tattler one, Sooty Tern two (one adult flying over bird colony, one immature on causeway perched for short time), Common Noddy 600± 50, White-capped Noddy five, Fairy Tern two.

Mac McConnaughey and I banded between 8 and 11:30 p.m. We banded twenty-one Common Noddies and two Ruddy Turnstones. Later in the evening Mac caught a Golden Plover by chasing it into the breezeway of the barracks. It was held overnight in a box in the pump house.

November 10--The plover was banded and released in good condition after being held for about six hours. This technique will be tried again.

Several hours were spent making up orange tags (No. 3's). We ran out last night finishing up a string of Noddy bands.

Six Fairy Terns were reported from the bird colony. Three were observed to alight (one on the large antenna, two on a guy wire), the first that I hand observed on rather than over Sand Island.

November 11--The island was surveyed between 8:15 and 10 a.m.: Shearwater one (adult in burrow entrance asleep), Brown Booby three, Red-footed Booby 50± 10, frigatebird 450± 25, Golden plover 25 ± 5, Ruddy Turnstone 15± 5, Wandering Tattler one (heard), Sooty Tern one (immature on ground south of transmitter building; four Fairy Terns hovered over this bird for several minutes), Common Noddy 500± 50 (two birds on a concrete block were observed calling at each other with outstretched neck and open bills for over two minutes; occasionally the birds would stop calling and would alternate peering at the ground giving the effect of bouring to each other), White-capped Noddy three, Fairy Tern four.

Dusk survey (6:30 to 7:3o p.m.) frigatebird 500± 50, Red-footed Booby 50± 15, Brown Booby six, Wandering Tattler two, Golden Plover 30± 10, Ruddy Trunstone 15, Common Noddy 600± 100 (peculiar flight display observed just before dusk; see notes for October 26), Sooty Tern three (two adults, one immature) was conducted with MacMcConnaughey.

Banding was carried out from 8:15 to 10:30 p.m. with Mac McConnaughey and by muself from 10:30 p.m. until 1 a.m. Common Noddy 41 (753-30301 to 30341), frigatebird 1 ♀ (737-44510).

November 12--Three new Berlese funnels arrived from the Smithsonian but Chief Harmes' said that they could not be wired until after the Western Area inspection. The original one here is working well in the pump house.

Dusk survey: All of the immature frigatebirds except one on north side and two on south side are flying, shearwater adults (two) work observed, Sooty Tern one immature (unbanded and untagged flying), Golden Plover 30± 10, Ruddy Trunstone 10+, frigatebirds 500± 50, Red-footed Booby 50± 10, Brown Booby three.

Banding was carried out from 10:15 p.m. until 12:30 a.m. Common Noddy twenty-four (753-30342 - 66), Golden Plover two (642-01012; - 01014).

Frigates were heard calling.

November 13--The dawn flight of the noddies was observed; there appears to be eight hundred to a thousand birds present. As usual there was a flock of frigatebirds circling over the bird colony (fifty-150 varying with the time of day, wind currents and disturbance by humans and dogs). Usually a few Brown and Red-footed Boobies are also present circling low over the island.

Most of the day was spent catching up on correspondence.

November 14--More correspondence was completed during the morning. The afternoon was spent checking over and cleaning the gear. A large number of batteries were checked and some were discarded.

Banding was carried out between 10:15 p.m. and 1:45 a.m. Thirty-three Common Noddies were banded (753-30367- 400). All of the birds, particularly noddies and shearwaters, are becoming increasingly more difficulty to approach. Many of them jump into the air immediately as soon as the light from the headlamp falls upon them. The Golden Plovers appear to roost in or upon small clumps of vegetation and are extremely wary. They call and usually run or fly at the first sign of activity.

In view of the upcoming bird shipment and photographic activities has been decided to temporarily suspendbanding operations in order to avoid as much disturbance of the bird colony as possible.

November 15--The biannual Western Area inspection of the island and installations was carried out today by a Coast Guard inspection team. They gave Sand Island a rating of excellent, the first ever given in this area.

November 15--The biannual Western Area inspection of the island and installations was carried out today by a Coast Guard inspection team. They gave Sand Island a rating of excellent, the first ever given in this area.

November 16--The weather has changed very radically for the first time since I arrived on Sand Island. The wind is coming from the south and there is a heavy cloud cover with the temperature actually comfortable for a change (probably in the mid 70's). Late in the afternoon the wind died down to practically nothing. Nearly all of the frigatebirds ceased circling as they usually do and perched on the guy wires (estimated population 500± 50). Most of the Red-footed Boobies still present apparently did the same (estimated population 150± 25).

November 17--The weather remained very cloudy but a very high humidity developed. The wind continued to blow from the south until the middle of the afternoon when it shifted back to the east and blew away most of the cloud cover. The weather conditions at this point seemed to return to normal.

Oscar Plumley caught a Golden Plover early in the morning while on watch close to the power house by blinding it with his spotlight. It was banded and released (642-01015) on the tennis court where it was immediately attacked by two other plovers (evidence of winter territoriality?).

Alan Holmes brought in a Ruddy Turnstone that Jeff (station mascot, dog) had caught on the point at the northeast corner of the island. It was fed, given water, banded (615-01016) and released outside of the barracks. It immediately started making its way toward the bird colony walking along the edge of the causeway.

Two Wandering Tattlers were seen along the causeway (one just outside the barracks and the other east of the signal building).

Mac McConnaughey reported at least six Fairy Terns on Johnston.

November 18--Mac McConnaughey reported seeing a sparrow-like bird fly over his head early in the evening flying along the causeway headed for the bird colony. I immediately went with him and we located the bird at once flushing it from the ground in the bunch grass just after leaving the causeway. The bird was probably an Asiatic species of lark. It was the size of a large sparrow and predominantly brownish streaked on the back and wings and also on at least part of the breast (upper half). There were reather pronounced white patches along the outer edges of the tail and it is quite likely that the bird had a medium-sized crest. The bird flew with an undulating flight but was extremely wary and impossible to approach. When flushed the bird gave a single short, musical call note. Mac got Holmes who brought the gun but the bird could not be approached. An intensive search of the upper end of the island had to be abandoned at dusk. The bird could have been hiding in the gunchgrass or it might have flown across the Johnston Island.

Five plus Fairy Terns were observed on Johnston Island at about 3:30 p..m. It appears that the birds usually present during the mid-afternoons and frequently early in the evening but they are often absent (at sea feeding?) at other times of the day.

November 19--An intensive search of the entire bird colony was conducted for the unidentified passerine seen last night. A grid area was paced off and the entire eastern end of Sand Island was searched systematically but the effort was unsuccessful. The following birds were recorded:

Common Noddy 800+ White-capped Noddy 12 Great Frigatebird 150+
Wedge-tailed Shearwater 15 (in burrows) Red-footed Booby 75+ Brown Booby 4
Golden Plover 30+ Ruddy Turnstone 25+ Wandering Tattler 1

The Army Photographic Center team (Sgts. Bowen, Thacker and White) arrived at 4 p.m. on the mail run. They will be working here but staying on Johnston. Their gear was stored in the pump house and we then took a fast tour of the bird colony. They left on the 6:30 p.m. M boat.

November 20--John Bushman and George Wislocki arrived on the 10 a.m. Northwest flight. They came over to Sand on the 11:30 a.m. M boat run. During the morning the photographic team obtained movies of the common species in the bird colony. Between 2 and 4 p.m. we worked with the photographic team showing capture and banding of frigatebirds and shearwaters. From 11 p.m. to 2 a.m. we captured two crates of birds (eight shearwaters and eight Noddy Terns) for use in the movies.

November 21--At 9:30 a.m. we talked with Ludwig on Kure regarding the shipment of three hundred ticks to Hicam where Bushman would pick them up. From 10:30 a.m. to 3 p.m. the movie production continued. Precedures photographed included crating of the birds and the collection of blood (of a shearwater). The centrifuge was used in an attempt to separete the serum for photographing but the tube broke because Bushman ran the centrifuge too fast.

From 9 p.m. to 3 a.m. we caught birds for the shipment to DTC. Ten adult frigatebirds (two banded but not tagged) and thirty-two Noddy Terns were secured and crated. Bushman excelled at capturing birds, as previously. Six frigatebirds were captured while roosting on the concrete bunker on the small offshore islet.

November 22--We were up at 7 a.m. to arrange the bird shipment to Hickam. We left Sand with the crates on the truck at 9 on the VP and arriving on Johnston 15 minutes later and immediately took the birds to the warehouse. At the MATS terminal Captain Thompson told us of President Kennedy's assination. At about 10:30 a.m. just before going back to Sand we saw a Red-tailed Tropicbird over the runway. At about 1 p.m. two Fairy Terns were seen along the causeway on Sand Island.

While on Johnston in the evening I talked with an engineer who claimed to have seen a Black-footed Albatross over the island on November 17.

November 23--No banding or survey work was undertaken. The weather was extremely humid and overcast with threatening skies most of the day and night.

November 24--A survey of the bird colony was undertaken from 10 a.m. to 12 noon. We recorded shearwater six in burrows, one adult on surface at high point east of transmitter building, Brown Booby eight, Red-footed Booby 60± 15, frigatebird 150± 25, Golden Plover 35± 5, Ruddy Turnstone 25± 5 (two tagged plover and two tagged turnstones were observed), Wandering Tattler one, Sooty Tern one (immature bird flying with healed wring previously broken), Common Noddy 650± 50. Also one frigatebird was noted carrying nesting material to a channel marker about a mile to the north of the island.

Intense winds and two fairly long periods of rain during the night prevented banding.

Nesting material was collected from three shearwater burrows just before noon and is being run through the Berlese funnels.

November 25--The day was spent organizing and labelling bands, tags and other tiems on the shelves in our cube during the morning and rearranging all of the items in the trunks in the pump house during the afternoon.

Late in the afternoon observations were made on a Golden Plover just outside the breezeway on the lawn on the north side of the barracks. The bird was making very strong attacks on the body and particularly the head of a dead Golden Plover. This is almost certainly an intense manifestation of displasement behavior. The territoriality is so strongly difined that the bird returns immediately after having been drive away and resumes its attacks. A roll of color picburds was taken of this behavior. The activities continued after sunset in the artificial light from the building. When the dead bird was moved to the territory of another bird in front of the barracks (to the west) negative results were obtained.

Banding was carried out from 11:30 p.m. to 1:30 a.m. but we were hampered greatly by very strong winds, intermittent rain showers and a three-quarters moon. We banded four Noddy Terns and three adult shearwaters. Five bands were recovered from dead birds.

It is becoming increasingly difficult to distinguish adult from immature shearwaters. The immatures possess light gray feather edgings on the gray feather edgings on the dark feathers of the back and wings which is perhaps the best method. There are also faint dark gray vermiculations on the feathers of the under tail coverts and flanks. When the gray feather edgings wear off the best method of separating adults from immatures is the lack of fear in the young birds plus their lighter weight. The immatures take flight much more reluctantly than the adults.

November 26--We spent the mroning taking inventory and labelling all of the bands, tags, and banding equipment in our cube. A ssheme was devised and a record book started for use in recording use of all bands starting December 1. It should represent an improvement over the small pocket notebook in use now.

During the afternoon we cleaned up the gear in the pumphouse and rearranged everything in the three trunks.

Two dead Golden Plover were found near the old dock and a band was recovered from one of the birds.

In the early evening five Fairy Terns were observed on Johnston.

From 9 p.m. to 1:30 a.m. 12 Noddy Terns and 21 Shearwaters (mostly chicks) were banded.

After this I talked with the Air Force personnel at the Camera Satellite Tracking Station for about an hour (Capt. Cornfoot, Sgt, Jim Shires). They described a sparrow-lik3 bird that had been hanging around their quarters on Johnston Island From their description and comments I suspect that it might be a longspure.

November 27--George and I spent the morning (7:30 to 11:30 a.m.) on Jonston Island searching for the longspure (?) and surveying the birdlife on the entire island. We recorded fifty to sixty Golden Plovers, fifty Ruddy Turnstone (two tagged), five Wandering Tattler, one Sanderling (typical gray winter plumage; bird observed at 30 to 80 feet range in excellent light). In spite of an intensive search the sparrow-like bird could not be located. Also two frigatebirds overhead.

Between 6 and 7 p.m. a Black-bellied Plover was closely observed through binoculars behind the barracks and along the causeway. Characteristics noted were the large size (larger and heavier than a nearby Golden Plover), mottled gray and white upper parts, white rump and tail (with a few small black bars near the tip of the tail) and the conspicous black axillars (observed three times while the bird was in flight). An unsuccessful attempt was made to collect the bird but it could not be approached within shotgun range.

From 10 p.m. to midnight 10 Nodyd Terns were banded. The moon is nearly full now and up all night greatly hindering our activity.

A fresh frigatebird egg was found on a nest site located southeast of the transmitter building. This is the first tangible evidence of the winter breeding season although active courtship has been observed for over a month. Also the last two immature frigates of the summer nesting season were observed flying for the first time today.

November 28--The bird colony was surveyed from 10 a.m. to noon: Red-footed Booby 200+ (an adult which had its foot caught in a guy wire was nearly caught for banding) Brown Booby 15 Hawaiian Noddy 1

Great Frigatebird 200+ Noddy Tern 1000+ Golden Plover 35

Ruddy Turnstone 25+ Wandering Tattler 1

Late in the afternoon we talked on the ham radio with Ken Amerman on Kure.

From 11 p.m. to midnight seven Noddy Terns and eight Wedge-tailed Shearwaters were banded. It is now almost impossible to distinguish immature from adult shearwaters in many cases. One obviously immature bird was observed just north of the transmitter building pumping its wings vigoursly but actually trying to fly.

November 29--A survey of the island was conducted between 9 and 10 a.m. Birds recorded were:

Red-footed Booby 400± 15 (actual count) Brown Booby 12 Golden Plover 30+

Great Frigatebird 150± 25 Ruddy Trunstone 20+ Common Noddy 800+

Wandering Tattler 2

An adult Red-tailed Tropicbird was observed circling over the barracks about noon. The bird flew parallel to the causeway to the bird colony.

The skeleton of the Bristle-thighed Curlew was collected (see September 28).

About 6:30 p.m. twelve Fairy Terns were counted flying above and to the west of the PX on Johnston. Three of the birds were observed to alight on telephone wires.

November 30--The island was surveyed between 11:30 a.m. and 12:30 p.m.:

Red-footed Booby 100+ Brown Booby 8 Common Noddy 600+

Golden Plover 30+ Ruddy Trunstone 20+ Red-tailed Tropicbird 2 adults (see November 9) landed close to marked site east of transmitter building.

Great Frigatebird 100+ about twenty birds flushed from the colony; a second fresh egg was noted on a nest site a few feet from the first one.

During the early afternoon we talked by radio with Ken Amerman and Jim Ludwig on Kure.

A full moon prevented banding as was the case last night.

December 1--The morning was spent catching up on field notes.

A survey of the colony was made between 2:30 and 3:30 p.m. An immature Red-footed Booby with a badly broken left wing was found close to the barracks along the causeway. From the deep pitched voice the bird was known to be a female. Since the break in the wing was extremely serious and could not possibly heal Geroge dispatched the bird. It was then taken to the pumphouse and feather lice were removed from it and preserved. The dead bird was then taken to the bird colony and thrown away. The following birds were recorded. Red-footed Booby 40± 3, Brown Booby 8, Great Frigatebird 150± 5, Noddy Tern 60± 5, Golden Plover 35± 5, Ruddy Trunstone 25± 5, Wandering Tattler 1.

Between 6 and 7 p.m. I went to the point at the northeast part of the island for target practice (firing off excess M-1 ammunition) with Alan Homles and Wilkie King. About 150 Noddy Terns and 1 Hawaiian Noddy were observed. Just before leaving Holmes caught a Red-footed Booby adult that had fallen to the ground stunned from a collision with a guy wire. The bird was taken to the barracks on the truck where it was banded and released. It took off from the seaplane ramp, dropped onto the water and then took off again flying north away from the island and finally turning toward the bird colony before it became too dark to see.

From 11 p.m. to midnight five shearwaters were banded. There are fewer than fifty shearwaters present and no adults were positively identified. A huge flock of Noddy Terns (1400± 200) was flushed from the eastern slope of the island. About a half dozen Sooty Terns were heard.

December 2--The bird colony was surveyed between 9 and 10 a.m. Red-tailed Tropicbird 1 (prolonged aerial display over unseen bird on ground south-east of transmitter building), Brown Booby 5, Red-footed Booby 150±,25, Great Frigatebird 200± 25, Golden Plover 30± 10, Noddy Tern 450± 25 Ruddy Turnstone 25± 5.

Geroge set up the mist nets during the afternoon and recovered a band from an almost clean skeleton. I worked on field notes and correspondence.

December 3--From 9 p.m. to midnight 15 Noddy Terns and 12 Wedge-tailed Shearwaters were banded.

December 4--From eight to 10 a.m. a second survey of Johnston Island was conducted (see November 27):

Sanderling 2 (both seen along the bay at the west end of the island; both in typical winter plumage)

Wandering Tattler 2 Ruddy Turnstone 40 Great Frigatebird 3

Golden Plover 30 Fairy Tern 5 Red-tailed Tropicbird 1

December 5--Geroge picked up an adult Sooty Tern about 8 a.m. that had no broken bones but was unable to fly. It was released and observed later in the same area (south part of the colony where two immature Sooty Terns (including one with a broken and rehealed wing) are still present).

A Red-tailed Tropicbird was observed over Johnston in the early afternoon and probably the same bird was seen over the bird colony on Sand later in the afternoon.

We talked with Ken Amerman, Jim Ludwig and Roger Clapp on Kure over the ham radio late in the afternoon.

From 10 p.m. to midnight we banded 29 Noddy Terns and two Wedge-tailed Shearwaters. A flock of about 100 Sooty Terns (mostly adults with perhaps a half dozen immatures identified by voice were seen and heard circling over the bird colony for a short time during our banding operations. They are very conspicuous with their constant calling. They have been heard for the past two nights and several members of the Coast Guard crew have commented about their presence.

December 6--George had to close the mist nets due to unusually high winds throughout the day. When he checked the frigatebird nesting area both eggs were found to be broken by unknown factors (possibly the birds themselves smash the eggs when they are disturbed and flush suddenly from the colony).

From 11 p.m. to 1 a.m. we banded 25 Noddy Terns. The flock of about 100 Sooty Terns was again conspicuously present for a short time as we banded.

December 7 --The day was spent writing up field notes and reports.

Four Sooty Terns were found in the bird colony on the grounds with broken wings (due to collisions with the guy wires). It seems as if the number of birds with broken wings might serve as a rough estimate of total population. The exact number of dead birds picked up each week by the Coast Guard crew could be recorded and these figures then checked against visual estimates. It probably would not be a sensitive enough indicator to be of real value but at least its use could be investigated.

From 10 p.m. to midnight twenty Noddy Terns were banded.

December 8--A third egg was found in a third nest site in the frigatebird colony. During the mid-afternoon a tropicbird was observed over the colony (no aerial display).

December 9--A survey of the bird colony was made between 8 and 9 a.m.

Brown Booby 5 Noddy Tern 300 Ruddy Turnstone 15
Golden Plover 30 Great Frigatebird 300± 25 Red-footed Booby 500± 25

A count of Red-footed Boobies coming in to roost on the guy wires early in the evening was taken. A substantial increase over the usual 300 to 400 birds was noted with a total of 650 being estimated. Most of these are adult birds.

The frigatebird population using the guy wires for roosting has decreased by 150 to 200 birds from the high of 600 to 650 during November. This large number may have been due to the presence of migrants from the Hawaiian Leewards which used the island temporarily before moving on. If birds had been colored banded or tagged there we might have been able to verify this.

The third frigatebird egg noted yesterday was found destroyed. The egg to adult success ratio for this species must be very low.

From 11 p.m. to midnight 15 Noddy Terns were banded.

December10--A survey of the bird colony was taken between 9:30 and 10:30 a.m.

Brown Booby 10 Red-footed Booby 50± 10 Golden Plover 40
Great Frigatebird 175± 25 Wandering Tattler 1 Noddy Tern 350± 25

An effort was made to determine a banded to unbanded ratio for Noddy Terns. After careful counts in several groups of terns on the northeast point we decided that about one out of every ten noddies is tagged and banded.

About noon three Red-tailed Tropicbirds were observed circling over the station. One bird was performing the aerial display. A second bird was missing its two long central rectrices.

Two new eggs were recorded in the frigatebird colony.

Most of the afternoon was spent photographing all species of plants on the island.

December 11--When George checked his nets at 7:30 a.m. he had two Golden Plovers which were banded and released and Black-bellied Plover which was collected and will be made into a specimen. This might have been the same bird seen on November 27. One Red-tailed Tropicbird was observed over the barracks.

A survey of the island was made between 10:30 and 11:30 a.m.
Red-tailed Tropicbird 2 Brown Booby 7 Red-footed Booby 180
Golden Plover 40 Great Frigatebird 300 Ruddy Trunstone 20 Noddy Tern 350± 20

In the early afternoon photographing of the Sand Island flora was completed. A collection of snails and rock crabs was made.

During the evening four specimens were made up into study skins (Black-bellied Plover, Pectoral Sandpiper, Wandering Tattler, Golden Plover) in the signal building.

Early in the evening the Red-footed Boobies roosting on the guy wires were carefully checked as they came in. A final estimate of 850± 25 was made.

December 12--A survey of the bird colony was made from 8:30 to 9:30 a.m.

Red-footed Boobies 150± 25 Golden Plover 40 Great Frigatebird 250± 20
Ruddy Turnstone 25 Noddy Tern 1000± 100 Wandering Tattler 1
Brown Booby 10

The morning was spent packing specimens and other materials plus personal belongings and preparing to leave Sand Island. The 11:30 M boat was late but I finally got to Johnston about noon and to the MATS terminal about twenty minutes later.

The plane was a half hour late leaving at 2 p.m. and arriving at Hickam AFB at 5:30 p.m. I then took a cab to the Hawaiian King Hotel in Honolulu after stopping at International Airport to make reservations for the first flight to Washington.

December 13--I left Honolulu on a United flight at 3 p.m. and arrived in Los Angeles at 10:15 p.m. There was a change to another United flight which left at 11:30 p.m.

December 14--The plane landed at Dulles at 6:15 a.m. I Caught a cab to National Airport where my wife picked me up at about 7:45 a.m.

Sundell has same data as Gould

Starbrite

Location Pacific Ocean first day out Oahu, Hawaii
Observers P. Gould, B. Sundell, B. Flint, K. Amerson, J. Ludwig Date 3 January 1964 Time 1020 to 1810
Weather cloudy, several rain squalls, hot, [illegible] 4 ft waves, many white caps, visibility good.

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross		[illegible]						constantly following ship; 1 ♀ collected, 1 banded
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby	3							
Red-footed Booby								
Great Frigatebird	3							
Golden Plover								
Ruddy Turnstone	3							1 ♀ collected
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Pomarine Jaeger		12+						1 ♀ collected
								Total # birds = 42+ (294)
								Total # flocks = 2
								Total # feeding flocks = 0

Starbrite

Location *Pacific Ocean second day out Oahu, Hawaii*

Observers *[illegible] [illegible] Fleet, Amerman* Date *4 January 1964* Time *0707* to *1835*

Weather *Lousy, completely overcast with clouds, waves up to 6 ft, wind around 18 knots, heavy rain squalls*

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross	3							1 ♀ collected
Wedge-tailed Shearwater	1							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	2							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird	2							
Masked Booby								
Brown Booby								
Red-footed Booby	1							
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	13							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy	1							
Blue-gray Noddy								
Fairy Tern	1							
Harcourt's Storm Petrel		2						
								Total # birds = 32
								Total # flocks = 1
								Total # feeding flocks = 0

Starbrite

Location Pacific Ocean; third day out Oahu, Hawaii
Observers [illegible] Date 5 January 1964 Time 0651 to 1850
Weather [illegible]

SPECIES	Abundance 1-10	10-100	100-1000	1000 +	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross	2							
Wedge-tailed Shearwater		14						probably all first year birds
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	7							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	7							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel	7							
								Total # birds = 38 (43)
								Total # flocks = 1
								Total # feeding flocks = 0

Starbrite

Location Pacific Ocean fourth day out Oahu, Hawaii
Observer Gould, Sundell, Ebert, Amerson, Ludwig Date 6 January 1965 Time 0708 to 1750
Weather warm and very calm, partly cloudy, wind less than 10 Knots (most of time less than 5 Knots), ocean very smooth.

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross	2							1 collected
Wedge-tailed Shearwater	9							probably all first year birds
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby	6							2 collected
Great Frigatebird	3							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		10						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Harcourt's Sto. Petrel	2							
								Total # birds = 38 (43)
								Total # flocks = 2
								Total # feeding flocks

Starbrite

Location Pacific Ocean fifth day out Oahu, Hawaii
Observers [illegible] Fleet, Amerson Date 7 January 1964 Time 0540 to 1800
Weather [illegible] warm, calm, clear, winds mostly below 10 knots

SPECIES	Abundance 1-10	 10-100	 100-1000	 1000 +	Breeding Nests	 Eggs	 Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	2							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	5							
White-tailed Tropicbird	3							1 collected
Masked Booby	3							
Brown Booby								
Red-footed Booby	2							
Great Frigatebird	2							2 collected
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								

Total # birds = 13
Total # flocks = 1
Total # feeding flocks = 1

Starbrite

Location Pacific Ocean sixth day out Oahu, Hawaii Grid Area
Observer Gould, Sudell, Eliot, Amerson, Date 8 January 1964 Time 0540 to 1855
Weather Ludwig clear, warm (80°), calm, wind about 10 knots (less most of day), very few scattered clouds

SPECIES	Abundance 1-10	 10-100	 100-1000	 1000 +	Breeding Nests	 Eggs	 Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby	3							
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	1							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
whales	4							looked like blackfish
								Total # birds = 8
								Total # flocks = 0
								Total # feeding flocks = 0

Starbrite

[illegible] Ocean seventh day out Oahu, Hawaii Grid Area
[illegible] 1 Feet, Overcast; Date 9 January 1964 Time 0540 to 1830
[illegible], warm, windy (to 16 Knots), few clouds

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000+	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross	/							
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	/							collected
White-tailed Tropicbird								
Masked Booby	2							
Brown Booby								
Red-footed Booby		10						3 collected
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	/							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel	1							

Total # birds = 23
Total # flocks = [illegible]
Total # feeding flocks = 0

Starbrite

[illegible] Oahu, Hawaii Grid Area
[illegible] January 1964 Time 0600 to 1832
[illegible] scattered clouds,
[illegible]

	Abundance				[illegible]			
SPECIES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Newell's Shearwater								
[illegible]								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	4							
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby	4							
Great Frigatebird	1							♂ collected
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
								Total # birds = 17
								Total # flocks = 0
								Total # feeding flocks = 0

Starbrite

Location [illegible] [illegible] day out Oahu, Hawaii Grid Area
[illegible] Date 11 January 1964 Time 0605 to 1820
[illegible] several rain squalls, warm,
[illegible]

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	1							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	6							4 collected
White-tailed Tropicbird								
Masked Booby	2							both adults 1 collected
Brown Booby								
Red-footed Booby	6							
Great Frigatebird	1							adult ♀
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Unknown [illegible] Petrel	1							
[illegible] Petrel								

Total # birds = 24 (26)
Total # flocks = 2
Total # feeding flocks = 1

S'Tarbrite

Location Pacific Ocean tenth day out Oahu, Hawaii Grid Area
Observers Gould, Sindell, Fleet, Amerman, Ludwig Date 12 January 1964 Time to
Weather windy (to 18 Knots), cloudy and hazy, several rain squalls, warm (to 80°)

SPECIES	Abundance 1-10	10-100	100-1000	1000 +	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	1							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	3							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby	8							1 ♂ collected
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Whitenecked Petrel	2							

Total # birds = 23
Total # flocks = 0
Total # feeding flocks = 0

Starbrite

Location Pacific Ocean eleventh day out Oahu, Hawaii Grid Area

Observers [illegible] Sundell, Fleet, Amerson, Date 13 January 1964 Time 0550 to 1830

[illegible] winds (15-20 knots), sky mostly cloudy,

[illegible]

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000+	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby	2							1 ♀ collected
Brown Booby								
Red-footed Booby	2							
Great Frigatebird	1							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
White-necked Petrel	1							
Harcourt's Storm Petrel	3							

Total # birds = 13
Total # flocks = 0
Total # feeding flocks = 0

Starbrite

[illegible] Pacific Ocean [illegible] day out Oahu, Hawaii Grid Area
[illegible] January 1964 Time 0545 to 1815
[illegible] cloudy clearing toward
[illegible] mid 70's

SPECIES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	1							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby	2							
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common [illegible]ody								
H[illegible]dy								
[illegible]dy								
[illegible]ern								
White-necked Petrel	4							
								Total # birds = 7
								Total # flocks = 0
								Total # feeding flocks = 0

Starbrite

Location Pacific Ocean thirteenth day out Oahu, Hawaii

U.S. Naval Fleet Anchorage Date 15 January 1964 Time 0605 to 1800

[illegible] (to 25+ knots), scattered clouds,

[illegible]

SPECIES	[illegible]				Breeding			Remarks
	[illegible]	[illegible]	[illegible]	[illegible]	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	2							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby	3							
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	1							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
White-necked Petrel	1							
								Total # birds = 15
								Total # flocks = 0
								Total # feeding flocks = 0

Starbrite

Location Pacific Ocean Seventy-mile day out Oahu, Hawaii
Observers Gould, Sundell, Eliot, Amerson, Ludwig Date 16 January 1964 Time 0610 to 1800
Weather Partly cloudy, cool (temp. in 70's)
wind between 40 and 50 knots

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross	1							
Black-footed Albatross	3							
Wedge-tailed Shearwater	1							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby	4							
Great Frigatebird	1							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
White-necked Petrel	1							

Total # birds = 14
Total # flocks = 0
Total # feeding flocks = 0

Starbrite

Location Pacific Ocean fifteenth day out Oahu, Hawaii

Observers Gould, Sundell, Ebert, Amerson, Ludwig Date 17 January 1964 Time 0730 to 1840

Weather Strong winds, frequent rain squalls.

SPECIES	Abundance 1-10	 10-100	 100-1000	 1000 +	Breeding Nests	 Eggs	 Young	Remarks
Laysan Albatross								
Black-footed Albatross	6							
Wedge-tailed Shearwater	2							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby								
Great Frigatebird	1							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	70							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	12							
Kermadec Petrel	1							Gould and Sundell
								Total # birds = 95
								Total # flocks = 2
								Total # feeding flocks = 2

Starbrite

Location [illegible] sixt [illegible] out Oahu Hawaii

[illegible] Time 0710 to 1830

[illegible]								Remarks
Laysan Albatross								
Black-footed Albatross								
[illegible]								
[illegible]								
[illegible]								
[illegible]								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	2							
Golden Plover								
Ruddy Turnstone	1							
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			157					
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Pomarine Jaeger	1							dark phase

Total # birds = 167
Total # flocks = 4
Total # feeding flocks = 3

BCF

[illegible] Pacific Ocean, first day out Honolulu, Hawaii
[illegible] Sundell Date 16 March 1968 Time 1430 to 1900
[illegible] windy (to 25 knots) partly cloudy wind from E

SPECIES	Abundance 1-10	 10-100	 100-1000	 1000 +	Breeding Nests	 Eggs	 Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	1							light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby	10							9 adults 1 immature
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			303					flocks of 6, 9, 200±, 12, 50
Gray-backed Tern								
Brown-winged Tern								
Common Noddy	3							
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Pomarine Jaeger		19						
Newell's Shearwater	6							flock of 5
Shearwater/petrel	1							
Booby sp	7							compact flock Red-footed (?)
								Total # sightings = 42
								Total # birds = 351
								Total # flocks = 7
								Total # feeding flocks = 0

Birds:	1538	5 Newell's Shearwater	travelling
	1614	6 Sooty Tern	travelling
	1705	9 Sooty Tern	travelling
	1715	200+ Sooty Tern	feeding
	1721	7 Booby sp.	travelling
	1747	12 Sooty Tern	travelling
	1749	50 Sooty Tern	feeding

BCF

Location [illegible] second day out Honolulu, Hawaii
[illegible] 17 March 1964 Time 0625 to 1845
[illegible] E 15 to 20 knots medium cloud
cover with one rain squall

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000+	Nests	Eggs	Young	
[illegible] Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	1							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	2							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		14						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
White-necked Petrel	1							
Harcourt's Storm Petrel	2							
Newell's Shearwater	1							
Tropicbird sp.	2							
Petrel sp.	3							
Shorebird	1							probable Sanderling
Shearwater/petrel	1							
Dark-rumped Petrel	2							Total # sightings = 12
								Total # birds = 32
								Total # flocks = 0
								Total # feeding flocks = 0

BCF

[illegible] third day out [illegible], Hawaii

Date 13 March 1964 Time 0618 to 1847

[illegible] from E moderate to heavy

[illegible]

[illegible]								Remarks
[illegible] Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	11							in flock with 40 Sooty Terns
Christmas I. Shearwater								
[illegible]								
[illegible]								
[illegible] Petrel								
[illegible] Petrel								
[illegible]								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								[illegible] 40, 10, 13
Gray-backed Tern								
[illegible] Tern								
Common Noddy								
[illegible] Noddy								
[illegible]								
[illegible]								
[illegible]	1							
[illegible]	1							
Storm petrel	1							
Shearwater sp.	2							
[illegible] sp.	1							

Total # sightings = 15

Total # birds = 88

Total # flocks = 3

Total # feeding flocks = 1

	[illegible]	Sooty Tern	feeding
	10	Wedge-Tailed? Shearwater	
1450	10	Sooty Tern	travelling
1555	13	Sooty Tern	travelling

BCF

[illegible] Hawaii

Observers [illegible]

Date [illegible] 1964 Time 0630 to 1846

Weather light wind (15 Knots) partly cloudy wind from E

SPECIES	Abundance 1-9	10-99	100-999	1000+	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	2							light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	1							+ 1 (?)
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		20						flock
Gray-backed Tern								
Brown-winged Tern								
? Common Noddy	1							
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Sooty Shearwater	3							+ 3 probable
[illegible]ourt's Storm Petrel	4							
Jaeger sp.	1							large gull-like brown above
Shearwater/petrel	2							light below white in primaries
								above
								Total # sightings = 22
								Total # birds = 43
								Total # flocks = 1
								Total # feeding flocks = 0

Flores I. 1630 20 Sooty Tern travelling

BCF

[illegible] Honolulu, Hawaii
Date 22 March 1984 Time 0615 to 1845
[illegible] 10 knots from E partly
[illegible] cloudy

Species	Abundance				Breeding			Remarks
	1-10	11-100	101-1000	1000+	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	6							4 dark phase 2 light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	2							
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		85						feeding flock of 50 flocks of 15,16
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel	6							
Storm Petrel sp.	2							
Newell's Shearwater	1							
Sooty Shearwater	8							+ 10 probable
Tropicbird sp.	2							
Shearwater sp.	2							
Shearwater/petrel	1							
								Total # sightings = 37
								Total # birds = 126
								Total # flocks = 3
								Total # feeding flocks = 2

Flocks:	1020	15	Sooty Tern	feeding
	1810	50	Sooty Tern	feeding
	1816	16	Sooty Tern	travelling

BCF

Location Pacific Ocean sixth day out Honolulu Hawaii

Observers King, Shundell Date 21 March 1964 Time 0615 to 1840

Weather Moderate winds 15-17 knots from N.E., fairly heavy swell, fairly thick overcast partially clearing at intervals; occasional rain squalls

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross	1							
Black-footed Albatross								
Wedge-tailed Shearwater		19						4 in flock w/ 16 Sooty Terns-all light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	13							
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	2							1 adult ♀
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		16						1 flock
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Newell's Shearwater	1							
Type B Harcourt's Storm Petrel	9							
petrel sp.	2							
Sooty Shearwater	5							
White-necked Petrel	1							
Shearw. /petrel	5							
white bird ?	1							
Storm petrel sp.	1							
Shearwater sp.	2							Total # sightings = 47
								Total # birds = 78
								Total # flocks = 1
								Total # feeding flocks = 0

[illegible] 1225 15 Sooty Tern travelling
4 Wedge-Tailed Shearwater

BCF

Location [illegible] [illegible] [illegible] [illegible] Honolulu, Hawaii
[illegible] [illegible] [illegible] Date 22 March 19[illegible] Time 0620 to 1345
Weather [illegible] [illegible] [illegible] [illegible] from E 15 ft. swells fairly heavy and
[illegible] [illegible] [illegible] [illegible] of widely scattered [illegible] in squalls

[illegible]					Feeding			Remarks
Laysan Albatross								
Black-footed Albatross	5							high count
Wedge-tailed Shearwater	5							all light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	1							+ 1?
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird	1							
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling	4							
Bristle-thighed Curlew								
Sooty Tern	5							1 flock
Gray-backed Tern								
Brown-winged Tern								
Common Noddy	1							
Hawaiian Noddy	1							
Blue-gray Noddy								
Fairy Tern								
Pomarine Jaeger	2							
Anous sp.	4							
L[illegible] sp.	1							medium size gray back tail white w/black tip
Sooty Shearwater		12						+ 16 probables
Shearwater sp.	6							
Shearwater/petrel	4							
petrel sp.	1							
Tern sp. (Sooty?)	2							Total # sightings = 45
Harcourt's Storm Petrel Type B	1							Total # birds = 75
								Total # flocks = 1
								Total # feeding flocks = 0

[illegible] 1409 5 Sooty Tern travelling

BCF

[illegible] Ocean eighth day out Honolulu, Hawaii
[illegible] Pyle, [illegible] Date 23 March 1964 Time 0614 to 1838
Weather Wind 15-25 Knots from E heavy to moderate cloud cover, scattered rain squalls

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross	6							high count 1824
Wedge-tailed Shearwater	1							1? light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling	1							
Bristle-thighed Curlew								
Sooty Tern	10							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
White-necked Petrel	1							
Tropicbird sp.	1							
Sooty Shearwater	4							
Shearwater/petrel	3							
Shearwater sp.	1							
								Total # sightings = 17
								Total # birds = 30
								Total # flocks = 0
								Total # feeding flocks = 0

BCF

Location Pacific Ocean ninth day out Honolulu, Hawaii

Observers King, Sundell Date 24 March 1964 Time 0604 to 1840

Weather light wind 6-12 Knots from E calm seas low swells

[illegible] swells, moderate cumulus cover

SPECIES	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks
Laysan Albatross								
Black-footed Albatross	2							
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	1							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel	1							
Sooty Shearwater	1							
Tropicbird sp.	1							
Shearwater sp.	1							
Shearwater/petrel	3							
								Total # sightings = 9
								Total # birds = 11
								Total # flocks = 0
								Total # feeding flocks = 0

BCF

Locality: P[illegible] Project [illegible] Honolulu, Hawaii
Observer [illegible] Sh[illegible]dell Date 25 March [illegible] 0601 to 1830
[illegible] 15-? Knots from E [illegible] building ; [illegible]
[illegible] rain squalls

[illegible]							Remarks
Laysan Albatross							
Black-footed Albatross							
Wedge-tailed Shearwater	[illegible]						1 dark phase 6 light phase
Christmas I. Shearwater							
Audubon's Shearwater							
Bonin I. Petrel							
Phoenix I. Petrel							
Bulwer's Petrel							
Sooty Petrel							
Red-tailed Tropicbird							
White-tailed Tropicbird	1						
Masked Booby							
Brown Booby							
Red-footed Booby							
Great Frigatebird							
Golden Plover							
Ruddy Turnstone							
Wandering Tattler							
Sanderling							
Bristle-thighed Curlew							
Sooty Tern	6						
Gray-backed Tern							
Brown-winged Tern							
Common Noddy							
Hawaiian Noddy							
Blue-gray Noddy							
Fairy Tern							
Harcourt's Storm Petrel Type B	3						
Tropicbird sp.	2						
Shearwater sp.	1						
Phalarope sp.	1						
							Total # sightings = 14
							Total # birds = 21
							Total # flocks = 1
							Total # feeding flocks = 1

flocks: 1025 5±2 Sooty Tern Feeding

BCF

On R/V Cromwell eleventh day out Honolulu, Hawaii
Observers King, Sundell Date 25 March 1964 Time 0555 to 1830
Weather Light winds 8-15 knots from E moderate to light cumulus cloud cover no rain

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	4							all light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	1							
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	2							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Shorebirds	3							Sanderlings or phalaropes
Harcourt's Storm Petrel	3							2 Type B
Storm petrel sp.	1							
Tropicbird sp.	1							
Sooty Shearwater	2							+ 1 possible Sooty Shearwater
Shearwater sp.	5							
Shear. / petrel	4							
								Total # sightings = 22
								Total # birds = 29
								Total # flocks = 2
								Total # feeding flocks = 0

BCF

Location Pacific Ocean, 1st day out Honolulu, Hawaii
[illegible] King, [illegible] Date 27 [illegible] 1964 Time 0604 to 1845
[illegible] 18 Knots from E moderately high swells
[illegible]

SPECIES	[illegible]	[illegible]	[illegible]	[illegible]	Nests	Eggs	Young	Remarks
Laysan Albatross	1							
Black-footed Albatross								
Wedge-tailed Shearwater	7							3 light phase 3 dark phase 1?
Christmas I. Shearwater ?	1							
Audubon's Shearwater								
Bonin I. Petrel ?	–							
[illegible]								
Bulwer's Petrel ?	1							
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird								
Masked Booby	2							immatures
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	44							flock of 40+ with 1 Wedge-tail
Gray-backed Tern								Shearwater and 10 shearwater sp.
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Sooty Shearwater	6							+ 4 probable Sooty Shearwaters
White-necked Petrel	2							
Shearwater/petrel	8							
Harcourt's Storm Petrel	1							Type B
Storm petrel sp.	1							
Shearwater sp.		11						flock of 10 with 40+ Sooty Terns
Newell's Shearwater	1							
Tropicbird sp.	1							Total # sightings = 28
								Total # birds = 92
								Total # flocks = 1
								Total # feeding flocks = 1

[illegible] [illegible] Sooty Tern feeding

[illegible] 31 [illegible]

10 [illegible] 9.

BCF

Location Pacific Ocean thirteenth day out Honolulu, Hawaii

Observer [illegible] Date 23 March 1964 Time 0551 to 1815

Weather Windy 15-20 Knots from E, heavy

SPECIES	[illegible]				Breeding			Remarks
	[illegible]	[illegible]	[illegible]	[illegible]	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		20						
Christmas I. Shearwater								9 light phase 11 dark phase flock of 10
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel ?	1							
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby	3							
Brown Booby								immatures
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		382+10						
Gray-backed Tern								feeding flocks of 250, 30, 75, 3
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
[illegible]		13						
Storm petrel sp.	7							
Shorebird sp.	1							phalarope or Sanderling
[illegible] Shearwater	6							+ 2 probables
White-winged Petrel	3							+ 2 probables
Black-winged Petrel	5							
[illegible]	3							
[illegible]	1	15						Total # sightings = 54
Petrel sp.	6							Total # birds = 481
Shearwater sp.	6							Total # flocks = 5
								Total # feeding flocks = 4

Flocks:	0800	200±	Sooty Tern	feeding
		10 +	Wedge-tailed Shearwater	
		5	Shearwater/petrel	
	1140	30	Sooty Tern	feeding
		2	Wedge-tailed Shearwater	
		4	Shearwater sp.	
		3	Harcourt's Storm Petrel	
		1	White-necked Petrel	
	1212	75±10	Sooty Tern	feeding
	1555	3+	Wedge-tailed Shearwater	travelling
		2+	Dark-rumped Petrel	
		1	Petrel sp.	
		2	Shearwater/petrel	
	1736	35±10	Sooty Tern	feeding

BCF

[illegible] Pacific Ocean [illegible] Honolulu, Hawaii
[illegible] Time 0551 to 1815
W[illegible] 12 knots from NE partly cloudy

SPECIES	Abundance 1-10	10-100	100-1000	1000 +	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	3							light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	/							
Phoenix I. Petrel								
Bulwer's Petrel	/							
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	/							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Newell's Shearwater	1							
Albatross sp.	1							
[illegible]-rumped Petrel	1							
[illegible] Shearwater	5							+3 probables
Shorebird	3							phalaropes or Sanderlings
Harcourt's Storm Pet.	3							2 Type B 1?
Storm petrel	1							Total # sightings = 36
Shearwater/petrel	10							Total # birds = 41
Petrel sp.	5							Total # flocks = 0
Shearwater sp.	2							Total # feeding flocks = 0

BCF

[illegible] 11 day out Honolulu, Hawaii

D[illegible] March 1976 Time 0610 to [illegible]

[illegible] high seas mostly overc[illegible]

wind from E

SPECIES	Abundance				Breeding			Remarks
	[illegible]	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	1							light phase
Christmas I. Shearwater								
Audubon's Shearwater								
[illegible] Petrel								
[illegible]								
[illegible] Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Sooty Shearwater		13						+ 9 probables
Shorebird	3							phalaropes or Sanderlings
Whitenecked Petrel	1							
Dark-rumped Petrel	1							
Harcourt's Storm Petrel	1							
Shearwater/petrel	6							
								Total # sightings = 27
								Total # birds = 35
								Total # flocks = 0
								Total # feeding flocks = 0

BCF

Location Pacific Ocean [illegible] out Honolulu, Hawaii
Observer King, Stimwell Date 1, April 1964 Time 0545 to 1815
Weather Very windy 22-30 knots high seas mostly overcast

Species					Breeding			Remarks
Laysan Albatross	1							seen by watch
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel	2							1 Type B 1?
Storm petrel sp.	4							
Shearwater/petrel	1							
Sooty Shearwater		10						+ 8 probables
								Total # sightings = 26
								Total # birds = 26
								Total # flocks = 0
								Total # feeding flocks = 0

BCF

Location [illegible] sixth day out Honolulu, Hawaii
Observers [illegible] II
Date 1 April 1964 Time 0615 to 1815
Weather

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross	1							
Black-footed Albatross	3							
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern								
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Shorebird	1							phalarope or Sanderling
Harcourt's Storm Petrel								
Short-tailed	[illegible]							
Sooty Shearwater								+ 14 probables

Total # sightings = 20
Total # birds = 25
Total # flocks = 0
Total # feeding flocks = 0

BCF

Location Pacific Ocean [illegible] Honolulu, Hawaii
[illegible] Date [illegible] 1964 Time 0555 to 1830
[illegible] high waves partly
[illegible] squalls

SPECIES	[illegible]				Breeding			Remarks
	[illegible]	[illegible]	[illegible]	[illegible]	Nests	Eggs	Young	
Laysan Albatross	2							
Black-footed Albatross	7							
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel ?	1							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel ?	1							
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern ?	2							
Gray-backed								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray N								
Fairy Tern								
Shearwater sp.	2							
Shearwater/petrel	4							
Shorebird	8							phalaropes or Sanderlings
Harcourt's Storm Petrel	7							6 Type B 1?
Sooty Shearwater		155						+ 30 probables
								Total # sightings = 137
								Total # birds = 222
								Total # flocks = 0
								Total # feeding flocks = 0

BCF

Location [illegible] Honolulu, Hawaii
Observer [illegible] Date 3 April 1964 Time 0555 to 1845
[illegible] Knots from E [illegible] clouds

Species								Remarks
[illegible]								
[illegible]								
[illegible]								
[illegible] I. Sh[illegible]								
Audubon's Shearwater								
[illegible] I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	1							in flock of 25 Sooty Terns
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
[illegible]								
Bristle-thighed Curlew								
Sooty Tern		[illegible]						flocks of 25, 25, 12
Gray-backed Term								
[illegible]-winged Tern								
Common Noddy								
Hawaiian N[illegible]								
Blue-gray Noddy								
Fairy Tern								
[illegible]	2							Type B
[illegible]	1							
[illegible]	7							[illegible] Shearwaters
[illegible]	2							
[illegible]				[illegible]				in flocks of 75, 5, 22 groups

Total # sightings = 37+ [illegible]
Total # birds = 1433
Total # flocks = 3
Total # feeding flocks = 3

flocks:	1210	25 ± 2	Sooty Tern	feeding
	1745	12	Sooty Tern	feeding
	1715	25 ± 5 1	Sooty Tern Frigatebird	feeding

BCF

[illegible] Pacific Ocean [illegible] Honolulu, Hawaii
[illegible] King [illegible] Date [illegible] April 1964 Time 0615 to 1845
Weather Wind 15-20 Knots from E few clouds

SPECIES	Abundance 5-10	11-100	100-1000	1000 +	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross	3							
Black-footed Albatross		46						
Wedge-tailed Shearwater		25						all light phase
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			227±13					flocks of 115, 60, 15, 6, 6
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	5							
Pomarine Jaeger	1							dark phase
small bird	1							
Shearwater/petrel	4							
Sooty Shearwater?	1							
								Total # sightings = 42
								Total # birds = 310
								Total # flocks = 5
								Total # feeding flocks = 3

--	6	Sooty Tern	travelling
0953	6	Sooty Tern	travelling
[illegible]	15±5	Sooty Tern	feeding
	4	Fairy Tern	
1240	115±10	Sooty Tern	feeding
	1	Fairy Tern	
1815	60+	Sooty Tern	feeding

Starbrite

[illegible] 1st day out Oahu, Hawaii
Date 4 May 19[illegible] Time 1100 to 1905

left Pearl Harbor at ca. 1045

[illegible]								Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas Shearwater								
Audubon's Shearwater								
[illegible] Petrel								
[illegible]								
Bulwer's Petrel	5							
[illegible] Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird	2							
Masked Booby								
Brown Booby								
Red-footed Booby	5							
Great Frigatebird	3							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		3[illegible]						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy	3							
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								

2 Golden Plover, 1 Black-necked Stilt on sandbar at entrance to Pearl Harbor

Total # sightings =
Total # birds = 167
Total # flocks = 2
Total # feeding flocks = 1

Starbrite

Location Pacific Ocean 3rd day out Oahu, Hawaii
Observer [illegible] Date 5 May 1964 Time 0600 to 1900

Species								Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		24						
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	5							
Sooty Petrel								
Red-tailed Tropicbird	4							
White-tailed Tropicbird	2							
Masked Booby	2							
Brown Booby								
Red-footed Booby	1							
Great Frigatebird	4							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			288±					
Gray-backed Tern	2							
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	2							
Newell's Shearwater	4							
Arctic Skua	1							
Sooty Shearwater	2							
Harcourt's Storm Petrel	3							
								Total # sightings =
								Total # birds = 384
								Total # flocks = 15
								Total # feeding flocks = 5

Starbrite

[illegible] Pacific Ocean [illegible] off Oahu, Hawaii
[illegible] Date [illegible] May 1964 Time 0600 to 1930
Weather Hoffman, Whitman

SPECIES	Abundance 1-10	10-100	100-1000	1000 +	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	3							
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird	1							
[illegible]ed Booby	1							
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		76±						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Harcourt's Storm Petrel	3							
								Total # sightings =
								Total # birds = 107
								Total # flocks = 5
								Total # feeding flocks = 1

Starbrite

[illegible] off Oahu, Hawaii

[illegible] Date 7 May 1964 Time 0610 to 1905

SPECIES								Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		61±						
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	3							
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby	6							
Great Frigatebird	5							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			830±					
Gray-backed Tern		12						
Brown-winged Tern								
Common Noddy	6							
Hawaiian Noddy	1							
Blue-gray Noddy								
Fairy Tern	1							
Sooty Shearwater	1							
Harcourt's Storm Petrel	1							

Total # sightings =

Total # birds = 936

Total # flocks = 22

Total # feeding flocks = 4

Starbrite

Location Pacific Oc[illegible] 5 Mi[illegible] out Oahu, Hawaii
Collectors [illegible] Date 8 May 1964 Time 0630 to 1900
Weather [illegible]

SPECIES	Abundance 1-10	10-100	100-1000	1000+	Breeding Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	✓							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	5							
White-tailed Tropicbird	1							
Masked Booby	1							
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		10±						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
[illegible] Noddy								
[illegible]	1							
[illegible] Shearwater	1							

Total # sightings =
Total # birds = 155±
Total # flocks = 5
Total # feeding flocks = 1

Starbrite GRID AREA

Location Pacific Ocean 6th day out Oahu, Hawaii
Observers Gould, Sundell, Ansermann. Date 9 May 1964 Time 0630 to 1840
Weather [illegible]

SPECIES	[illegible]				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Leysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater								
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	2							
Phoenix I. Petrel								
Bulwer's Petrel	2							
Sooty Petrel								
Red-tailed Tropicbird	2							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	9							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								

Total # sightings =
Total # birds = 24
Total # flocks = 0
Total # feeding flocks = 0

Starbrite GRID AREA

Location Pacific Ocean 7th day out Oahu, Hawaii
Observers [illegible], Shaddell, Amerman, Date 10 May 1964 Time 0643 to 1940
Weather [illegible], Whitman

	Abundance				Breeding			
SPECIES	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		52±						1 collected
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	1							
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird	1							
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	3							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			537±					4 collected 4 with orange tags observed
Gray-backed Tern		25±						
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel	1							

Total # sightings =
Total # birds = 591±
Total # [illegible]'s = 6
Total # feeding fl[illegible]'s = 2

S'Amarite GRID AREA

[illegible] East Oahu, Hawaii

[illegible] Date 11 May 1984 Time 0700 to 1950

	Abundance				Breeding			Remarks
Laysan Albatross								
[illegible] Albatross								
[illegible]								
[illegible]								
[illegible]'s Shearwater								
[illegible]								
Phoenix I. Petrel								
Bulwer's Petrel	1							
Sooty Petrel								
Red-tailed Tropicbird	3							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	1							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		215±						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	4							
Sooty Shearwater	1							

Total # sightings =

Total # birds = 255±

Total # flocks = 4

Total # feeding flocks = 1

Starbrite GRID AREA

Location Pacific Ocean southwest Oahu, Hawaii

Observers Gould, Sundell, [illegible] Date 12 May 1964 Time 0657 to 1940

Weather [illegible]

	[illegible]				Breeding			
SPECIES	1-10	[illegible]	[illegible]	[illegible]+	Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		17±						
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	3							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	1							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			482±					
Gray-backed Tern	1							
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Harcourt's Storm Petrel	1							
								Total # sightings =
								Total # birds = 507±
								Total # flocks = 7
								Total # feeding flocks = 3

Starbrite GRID AREA

Location Pacific Ocean 19th day out Oahu, Hawaii
Observers [illegible] Date 13 May 1964 Time 0658 to 1900
Weather HOLMAN, WHITMAN

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater	2							
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	/							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby	/							
Brown Booby								
Red-footed Booby								
Great Frigatebird	/							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		81 ±						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								

Total # sightings =
Total # birds = 91 ±
Total # flocks = 2
Total # feeding flocks = 1

Starbrite GRID AREA

Location Pacific Ocean 11th day out Oahu, Hawaii

Observers Gould, Sundell, Amerman, Date 14 May 1964 Time 0630 to 1945

Weather Hoerman, Whitman

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		13						
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel	1							
Sooty Petrel								
Red-tailed Tropicbird								
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	2							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			165					
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
Harcourt's Storm Petrel								
Parasitic Jaeger	1							

Total # sightings =

Total # birds = 180±

Total # flocks = 2

Total # feeding flocks = 1

Starbrite

[illegible] off Oahu, Hawaii
[illegible] Date 15 May 1964 Time 0643 to 1943
[illegible]

[illegible] Island

	Abundance				Breeding			
SPECIES	1-10	11-100	100-1000	1000 +	Nests	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		44 ±						2 orange tagged birds observed
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	1							
Phoenix I. Petrel								
Bulwer's Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby	1							
Brown Booby								
Red-footed Booby	6							
Great Frigatebird	4							
Golden Plover								
Ruddy Turnstone	7							
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			816 ±					7 collected 5 orange tagged birds observed
Gray-backed Tern								
Brown-winged Tern								
Common Noddy		47 ±						1 orange tagged bird observed
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern	1							
Harcourt's Storm Petrel	1							
Sooty Shearwater	3							

Total # sightings =
Total # birds = 951±
Total # flocks = 40
Total # feeding flocks = 1

Starbrite

[illegible] Cruise 13th day out Oahu, Hawaii
[illegible] 13 May 1964 Time 0630 to 1830
[illegible]

[illegible]	[illegible]				Breeding			Remarks
	[illegible]	[illegible]	[illegible]	Total	[illegible]	Eggs	Young	
[illegible]								
[illegible]								
[illegible]								
[illegible]								
[illegible]								
[illegible]								
[illegible]								
[illegible] Petrel								
Sooty Petrel								
Red-tailed Tropicbird	1							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby								
Great Frigatebird	2							
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern	6							
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fairy Tern								
[illegible] Storm Petrel	1							
S[illegible] Shearwater	7							
								Total # sightings =
								Total # birds = 37
								Total # flocks = 0
								Total # feeding flocks = 0

Starbrite

[illegible] Oahu, Hawaii
[illegible] 0825 to 17[illegible]

Species	Abundance 1-10	10-100	100-1000	1000+	Breeding Nest	Eggs	Young	Remarks
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		25	[illegible]					
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel	2							
Phoenix I. Petrel								
Bulwer's Petrel		13						
Sooty Petrel								
Red-tailed Tropicbird	5							
White-tailed Tropicbird								
Masked Booby								
Brown Booby								
Red-footed Booby	3							
Great Frigatebird		11						
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern			25	[illegible]				
Gray-backed Tern								
Brown-winged Tern								
Common Noddy								
Hawaiian Noddy								
Blue-gray Noddy								
Fa[illegible]	4							
Newell's S[illegible]								
Sooty Shearwater								

Total # sightings =
Total # Birds = 446±
Total # flocks = 4
Total # feeding flocks = 3

Starbrite

[illegible] Pelika C[illegible] 15th day out Oahu, Hawaii
[illegible] Date 18 May [illegible] Time 0600 to 1232
Weather Hermann, Whitman

SPECIES	Abundance				Breeding			Remarks
	1-10	10-100	100-1000	1000 +	Nests	Eggs	Young	
Laysan Albatross								
Black-footed Albatross								
Wedge-tailed Shearwater		45±						
Christmas I. Shearwater								
Audubon's Shearwater								
Bonin I. Petrel								
Phoenix I. Petrel								
Bulwer's Petrel		11						
Sooty Petrel								
Red-tailed Tropicbird								
[illegible]-tailed Tropicbird								
[illegible] Booby								
Brown Booby								
Red-footed Booby	1							
Great Frigatebird								
Golden Plover								
Ruddy Turnstone								
Wandering Tattler								
Sanderling								
Bristle-thighed Curlew								
Sooty Tern		100±						
Gray-backed Tern								
Brown-winged Tern								
Common Noddy	7							
Hawaiian Noddy								
[illegible]								
[illegible]								
[illegible]	1							[illegible]
[illegible]		[illegible]						
[illegible]	[illegible]							
[illegible] Shear[illegible]		12						

Total # sightings =
Total # birds = 201±
Total # flocks = 5
Total # feeding flocks = 2